

## REMARKS

Careful consideration has been given to the Official Action of July 17, 2003 and reconsideration of the application as amended is respectfully requested.

Claims 3, 4, 19 and 20 have been cancelled without prejudice. The remaining claims have been amended to overcome the formal objections and the cited art. Claims 1, 2, 5-19, 21 and 22 remain. As now presented, these claims are deemed to be free from formal objection and allowable over the cited art. This will be explained in detail hereafter.

The cited references all fail to teach or suggest the following two features: (1) light-scattering particles made of quartz, glass or polymeric transparent materials for scattering the light emitted from the light source; and (2) diffuser particles selected from  $\text{BaTiO}_3$  and  $\text{Ti}_2\text{O}_3$  for mixing the light emitted from the light-scattering particles and the phosphor particles.

The references will now be discussed individually in relation to the claims to which they have been applied.

US 2002/0180351 McNulty is distinguished from the now claimed invention as follows:

As to claim 1, McNulty discloses a light-mixing layer comprising light-scattering particle of glass or SiO. However, the light-mixing layer of the present invention comprises light-scattering particles made of quartz, glass or polymeric transparent materials from scattering the light emitted from the light source, and diffuser particles selected from BaTiO<sub>3</sub> and Ti<sub>2</sub>O<sub>3</sub> for mixing the light emitted from the light-scattering particles and the phosphor particles. McNulty neither teaches nor suggests using diffuser particles BaTiO<sub>3</sub> or Ti<sub>2</sub>O<sub>3</sub> for mixing the light emitted from the light-scattering particles and the phosphor particles.

As to claims 11 and 16, McNulty does not teach or suggest use of diffuser particles of BaTiO<sub>3</sub> and Ti<sub>2</sub>O<sub>3</sub> for mixing the light emitted from the light-scattering particles and the phosphor particles.

The claims as now amended are patentably distinguished from McNulty as explained above.

US 6,245,259 Hohn is distinguished from the now claimed invention as follows:

As to claim 1, Hohn only discloses a light-mixing layer including diffusers, which are also light-scattering particles. However, the light-mixing layer of the present invention comprises light-scattering particles made of quartz, glass or polymeric transparent materials for scattering the light emitted from the light

source, and diffuser particles of BaTiO<sub>3</sub> or Ti<sub>2</sub>O<sub>3</sub> for mixing the light emitted from the light-scattering particles and the phosphor particles. That is, the present invention uses two different particles to mix the light in sequence. In addition, Hohn does not disclose the use of BaTiO<sub>3</sub> or Ti<sub>2</sub>O<sub>3</sub> as the diffuser particles for mixing the light from the light-scattering particles and the phosphor particles.

As to claims 11 and 16, Hohn fails to teach or suggest the use of diffuser particles of BaTiO<sub>3</sub> or Ti<sub>2</sub>O<sub>3</sub> to mix the light emitted from the light-scattering particles and the phosphor particles. The present invention is therefore patentably distinguished from Hohn.

US 6,294,800, Duggal is patentably distinguished from the now claimed invention as follows:

As to claim 16, Duggal discloses a method for making a light mixing layer, which uses light-scattering particles of CR-30 alumina powder with Ti<sub>2</sub>O<sub>3</sub> to scatter the light emitted from a laser diode. However, Duggal does not disclose using light-scattering particles of quartz, glass or polymeric transparent materials to scatter the light emitted from the light source, or using diffuser particles of BaTiO<sub>3</sub> or Ti<sub>2</sub>O<sub>3</sub> to mix the light emitted from the light-scattering particles and the phosphor particles.

Obviously, claim 16 is now distinguished from Duggal.

US 6,413,790 Duthaler is distinguished from the now claimed invention as follows:

As to claim 16, Duthaler discloses the use of silicon oxide for light scattering. However, Duthaler does not disclose using diffuser particles  $\text{BaTiO}_3$  or  $\text{Ti}_2\text{O}_3$  to mix the light emitted from the light-scattering particles and the phosphor particles. Claim 16 is thus distinguished from Duthaler.

US 6,228,543 Mizuno discloses a plasticizer-containing layer including light-scattering particle, diffusing particles and phosphor particles. However, the light-mixing layer of the present invention comprises light-scattering particles of quartz, glass or polymeric transparent materials for scattering the light-emitted from the light source, and diffuser particles of  $\text{BaTiO}_3$  and  $\text{Ti}_2\text{O}_3$  for mixing the light emitted from the light-scattering particles and the phosphor particles.

The '543 Mizuno patent neither teaches nor suggests the use of light-scattering particles of quartz, glass or polymeric transparent materials. In addition, the disclosure of the Mizuno patent does not disclose a light-mixing layer using diffuser particles of  $\text{BaTiO}_3$  or  $\text{Ti}_2\text{O}_3$  for mixing the light emitted from the light-scattering particles and the phosphor particles. Claim 1 is therefore patentably distinguished from the Mizuno patent.

As to claim 16, the Mizuno Patent in no way teaches or suggests the

use of light-scattering particles of quartz, glass or polymeric transparent materials to scatter the light emitted from the light source, and the use of diffuser particles of  $\text{BaTiO}_3$  or  $\text{Ti}_2\text{O}_3$  to mix the light emitted from the light-scattering particles and the phosphor particles. Therefore, claim 16 is distinguished from the Mizuno patent.

In view of the above action and comments early and favorable reconsideration of the application and allowance of the claims is earnestly solicited.

Respectfully submitted,



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JULIAN H. COHEN  
C/O LADAS & PARRY  
26 WEST 61<sup>ST</sup> STREET  
NEW YORK, N.Y. 10023  
REG. NO. 20302 - 212-708-1887